

A NEW NEOTROPICAL ANONCIA SPECIES (COSMOPTERIGIDAE)

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ABSTRACT. *Anoncia crossi* is described from 1 male and 15 females collected in Guerrero, Mexico. *Anoncia crossi* is differentiated from *A. diveni*, the only other congener to occur in the Neotropics, by structural differences in male and female genitalia, and shape of the eighth tergum. A photograph of the imago and illustrations of wing venation, modified eighth tergum and sternum of the male, and male and female genitalia are included.

Additional key words: Gelechioidea, Cosmopteriginae, Mexico, *Anoncia crossi*, *A. diveni*.

Anoncia is a New World genus with 31 species known from the SW United States, Mexico, and Honduras (Hodges 1978, 1983). Larvae feed on Labiatae, Loasaceae, and Verbenaceae as leaf tiers and leaf miners, or in immature ovaries of developing fruit (Hodges 1978).

Clarke (1941a) proposed *Anoncia* to include seven previously described species. After the description of a new *Anoncia* and two species transferrals into *Anoncia* (Clarke 1942), the genus was ignored in taxonomic treatments until the studies of Hodges (1962, 1978, 1983). Hodges (1962) described 9 *Anoncia* and made 2 synonymies, and in a review of the genus (Hodges 1978) synonymized 2 species and added 16 species including 3 new combinations. Hodges (1978) provided adequate descriptions, and a generic key that places the species described here in *Anoncia* on the basis of the following characters: hindwing with M_3 and Cu_1 connate or stalked, rarely separate; forewing with Cu_1 and Cu_2 slightly downcurved from cell then parallel with M_3 , ocelli absent; aedeagus without dorsal projection from midregion.

Discovery of the species described here resulted from examination of unidentified specimens during systematics study of North American Blastobasidae (Gelechioidea). The new species is described here because it is only one of two species of *Anoncia* known from the Neotropics, and will undoubtedly contribute to future understanding of the evolution of the genus.

Pinned specimens and genitalic preparations were examined using a stereomicroscope and a phase-contrast microscope. Colors of vestiture were described using Kornerup and Wanscher (1978) as a standard. Genitalia were dissected as described by Clarke (1941b), except that mercurochrome and chlorazol black were used as stains.



FIG. 1. *Anoncia crossi*, holotype female.

***Anoncia crossi* Adamski, new species**
(Figs. 1–6)

Head. Scales on frontoclypeus and vertex basally and apically white with subapical brown band, or white with brown apex; scape, pedicel, flagellomeres mostly brown intermixed with white scales, antennal pecten concolorous with vertex scales; 2nd segment of labial palpus with basal and dorsomedial scales brown, medial and subapical scales white, terminal segment with basal and dorsomedial scales white, medial and subapical scales brown, or with mostly brown scales on outer surface, and mostly white scales on inner surface. **Thorax.** Tegulae and mesoscutum concolorous with vertex scales, or brown intermixed with light-brown, or mostly brown scales, tegulae occasionally with white marginal scales. **Legs.** Mostly brown intermixed with white scales, each segment and tarsomere with white apical band, each tibia with median band (sometimes not expressed on tibia 1), coxa 1 and femora 2–3 occasionally mostly white intermixed with brown scales. **Forewing** (Figs. 1, 2). Length 6.7–8.4 mm ($n = 16$); ground color gray; basal wing scales white with brown, light-brown, or brownish gray apex; submedial fascia with mostly semierect brown scales, delimiting a subcircular patch of light-brown scales near middle of discal cell, posterior portion of submedial fascia pale; scales on wing adjacent to inner margin of submedial fascia mostly white, intermixed with white scales tipped with light-brown; scales on distal portion of wing mostly white, tipped with light-brown, intermixed with white scales tipped with brown; ventral surface uniform grayish brown; venation as in Fig. 2 ($n = 3$). **Hindwing** (Figs. 1, 2). Dorsal and ventral surfaces uniformly light grayish brown; venation as in Fig. 2 ($n = 3$). **Abdomen.** Anterior portion of segments with grayish brown scales, posterior portion with light grayish brown scales; eighth tergum and sternum modified as in Figs. 3–4, seventh segment unmodified ($n = 1$). **Male genitalia** (Fig. 5) ($n = 1$). Uncus absent, gnathos with two highly sclerotized asymmetrical projections, apical setae absent, larger projection serpentine-shaped and apically blunt, smaller projection apically pointed posteriorly, posterior margin deeply arched; tegumen and aedeagus heavily sclerotized, aedeagus ankylosed with heavily sclerotized diaphragma, partially setose on apical rim, cornuti absent; vinculum broad throughout; valvae asymmetrical, right valva reduced laterally, with large basal lobe, broad at base, left valva laterally broadened, modified basally into a long, thin, apically setose projection, slightly expanded basilaterally. **Female genitalia** (Fig. 6) ($n = 3$). Ostium bursae asymmetrically

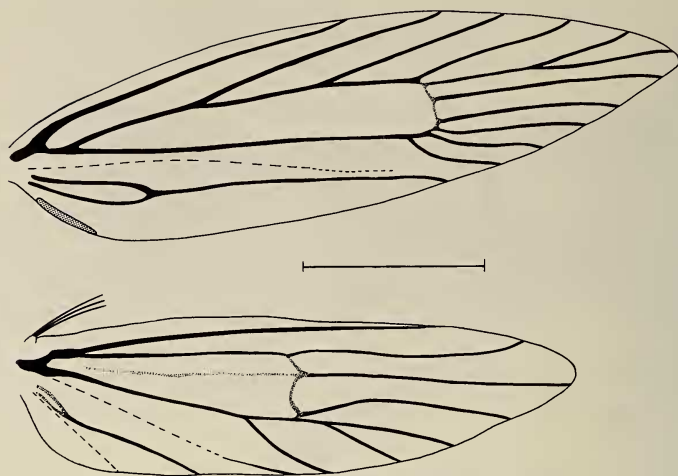


FIG. 2. Wing venation of *Anoncia crossi*. Scale line = 2.0 mm.

situated on eighth tergum; ductus bursae membranous throughout; corpus bursae membranous with spinules on walls, with accessory bursae at base; ductus seminalis arising from accessory bursa, signum absent; apophyses anteriores widely separated basally, arising from lateral margin of eighth tergum; eighth tergum with pair of short submedial

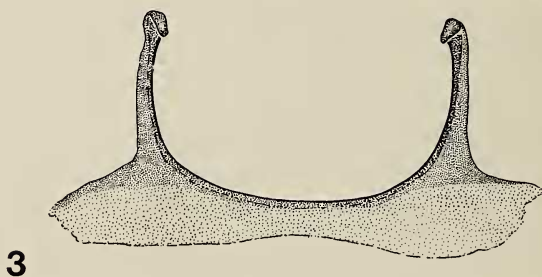


FIG. 3. Eighth tergum of male *Anoncia crossi* (dorsal view). Scale line = 0.5 mm.

FIG. 4. Eighth sternum of male *Anoncia crossi* (dorsal view). Scale line = 0.5 mm.

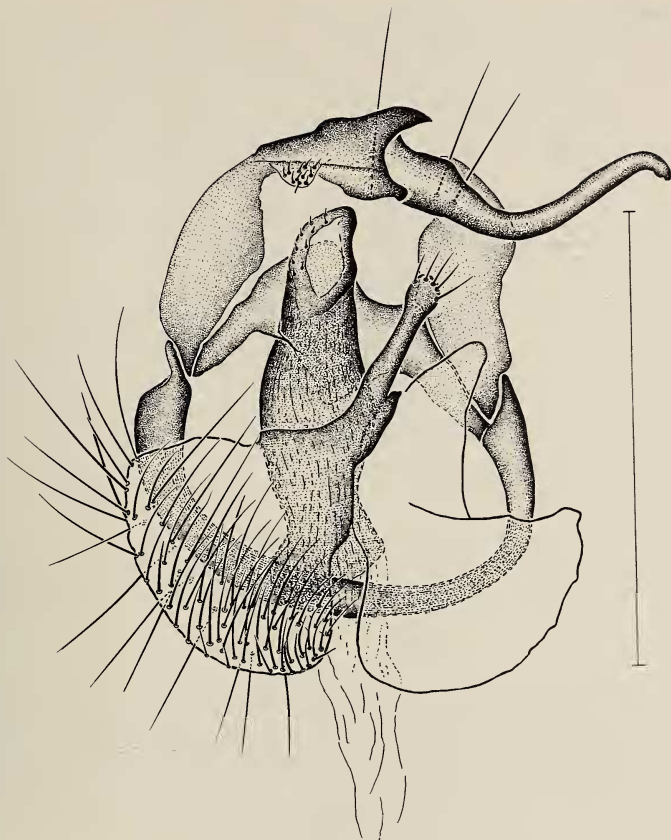


FIG. 5. Male genitalia of *Anoncia crossi* (posterior view). Scale line = 0.5 mm.

projections, posterior margin slightly emarginate medially; seventh abdominal segment unmodified.

Types. Holotype (Fig. 1) female: Mex[ico], Guerrero, Zapilote C[an]y[o]n, 8 km S[outh] Mezcala, IX-10-82, 550 m; [Collectors] J. A. Powell and J. A. Chemsak, at light. Holotype not dissected, deposited in Essig Entomology Museum, University of California, Berkeley, California. Paratypes (1 male, 14 females): 1 female same data as holotype; 4 females Mex. Guerrero, 32 km W Eguala, IX-11-82, elev. 1350 m; J. A. Powell and J. A. Chemsak, D. Adamski wing slide nos. 3029, 3129, 3130 and gen. slide nos. 3127 and 3128; 2 females same as previous data except IX-15-87; 1 male, 5 females same except IX-15-82, D. Adamski male gen. slide no. 3027; 2 females 10 km E Tixtla; IX-18/22-82; elev. 1770 m, D. Adamski female gen. slide no. 3028. Two female paratypes in U.S. National Museum, other paratypes in same depository as holotype.

Remarks. *Anoncia crossi* appears closely allied to *A. diveni* (Heinrich), and these are the only *Anoncia* congeners known in the Neotropics. Each possess a light-brown patch of scales within the submedial fascia of the forewing. Males of both species possess an unmodified seventh abdominal segment, valvae are short and broad, and size and shape of aedeagus are similar. Females of both species have a membranous ductus bursae, an accessory bursae that arises from base of the corpus bursae, lack signa, and have apophyses anteriores that arise from lateral margins of the eighth sternum.

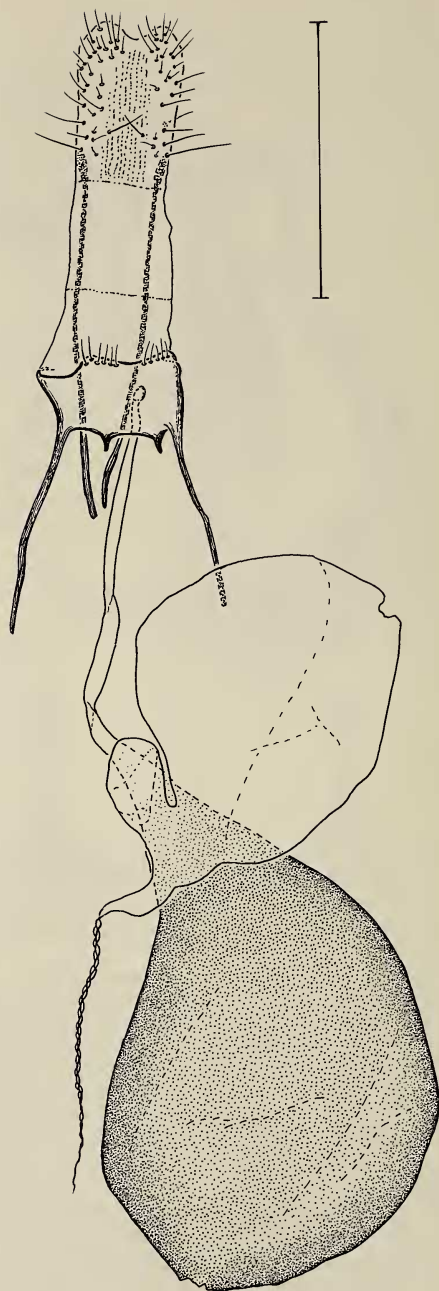


FIG. 6. Female genitalia of *Anoncia crossi* (dorsal view). Scale line = 1.0 mm.

Males of *crossi* can be separated from those of *diveni* by the acute angle and broader lobe on the right valva, presence of apical setae on basal projection of the left valva, presence of expanded base of the basal projection of the left valva, broad vinculum throughout, pointed apex of the left brachium, absence of a dorsal projection on base of right brachium, presence of setae on apical rim of the aedeagus, and linear shape of the eighth abdominal tergum. Females of *crossi* can be separated from those of *diveni* by presence of a pair of small projections on the anterior margin of the eighth tergum between apophyses anteriores.

Hodges's (1978) key to species of *Anoncia* is modified below to include *A. crossi*. In the part treating males, couplet 23 is modified, and couplet 23' added; in the part treating females, couplet 39 is modified and couplet 39' added. The modifications read as follows:

- | | | |
|------|--|----------------|
| 23. | Valvae short, broadly joined basally (text fig. 17b) | 23' |
| - | Valvae longer, narrowly joined basally (text fig. 18d) | 24 |
| 23'. | Left valva with basal lobe setose apically | <i>diveni</i> |
| - | Left valva with basal lobe without setae | <i>crossi</i> |
| 39. | Eighth abdominal tergum concavely excavated, genital plate at least ½ width of 8th abdominal tergum (text fig. 28a) | 39' |
| - | Eighth abdominal tergum concavely excavated, genital plate less than ½ width of 8th abdominal tergum (text fig. 26f) | <i>diveni</i> |
| 39'. | Anterior margin of 8th abdominal tergum with two short lobes | <i>crossi</i> |
| - | Anterior margin of 8th abdominal tergum without such lobes | <i>smogops</i> |

Etymology. The new species is named in honor and memory of Dr. William H. Cross, naturalist, ecologist, taxonomist, and founder of the Mississippi Entomological Museum at Mississippi State University, who died in Mexico in 1984 on a collecting expedition.

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